



# Search Report

## EIC 1700

STIC Database Tracking Number: 2440

To: JOHN HARDEE  
Location: REM-9A41  
Art Unit: 1796  
Tuesday, November 27, 2007  
Phone: (571) 272-1318  
Case Serial Number: 10 / 507203

From: JAN DELAVAL  
Location: EIC1700  
REM-4B28 / REM-4A30  
Phone: (571) 272-2504

[jan.delaval@uspto.gov](mailto:jan.delaval@uspto.gov)

### Search Notes

# SEARCH REQUEST FORM

Scientific and Technical Information Center

Access DB# 244061

Requester's Full Name: Harde Examiner #: 42786 Date: 11/27/07  
 Art Unit: 1796 Phone Number 30 21318 Serial Number: 10/507,203  
 Mail Box and Bldg/Room Location: 9A41 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

\*\*\*\*\*

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: \_\_\_\_\_

Inventors (please provide full names): \_\_\_\_\_

Earliest Priority Filing Date: \_\_\_\_\_

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Whatever you can find. Thanks

SCIENTIFIC REFERENCE BP  
 Sci & Tech Inf Ctr

NOV 27

Pat. & T.M. Office

Please Rush  
 10/27/07  
 SPE 1796

## STAFF USE ONLY

Searcher: an

Searcher Phone #: \_\_\_\_\_

Searcher Location: \_\_\_\_\_

Date Searcher Picked Up: 11/27/07

Date Completed: 11/27/07

Searcher Prep & Review Time: \_\_\_\_\_

Clerical Prep Time: 20

Online Time: 40

## Type of Search

NA Sequence (#) \_\_\_\_\_

AA Sequence (#) \_\_\_\_\_

Structure (#) ✓

Bibliographic \_\_\_\_\_

Litigation \_\_\_\_\_

Fulltext \_\_\_\_\_

Patent Family \_\_\_\_\_

Other \_\_\_\_\_

## Vendors and cost where applicable

STN ✓

Dialog \_\_\_\_\_

Questel/Orbit \_\_\_\_\_

Dr.Link \_\_\_\_\_

Lexis/Nexis \_\_\_\_\_

Sequence Systems \_\_\_\_\_

WWW/Internet \_\_\_\_\_

Other (specify) \_\_\_\_\_

=> fil reg

FILE 'REGISTRY' ENTERED AT 13:14:40 ON 27 NOV 2007

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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 26 NOV 2007 HIGHEST RN 955995-34-3

DICTIONARY FILE UPDATES: 26 NOV 2007 HIGHEST RN 955995-34-3

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

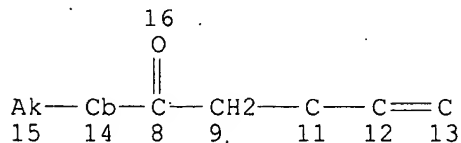
Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=> d sta que 145

L41 STR



NODE ATTRIBUTES:

CONNECT IS M1 RC AT 11

CONNECT IS M1 RC AT 12

CONNECT IS M1 RC AT 13

DEFAULT MLEVEL IS ATOM

GGCAT IS MCY AT 14

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 8

STEREO ATTRIBUTES: NONE

L42 201673 SEA FILE=REGISTRY ABB=ON PLU=ON 46.150.2/RID

L45 52 SEA FILE=REGISTRY SUB=L42 SSS FUL L41

100.0% PROCESSED 2742 ITERATIONS

52 ANSWERS

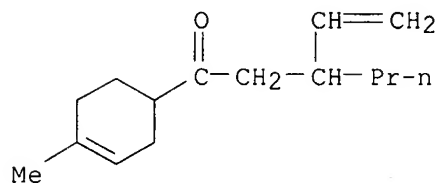
SEARCH TIME: 00.00.01

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L51 ANSWER 1 OF 5 REGISTRY COPYRIGHT 2007 ACS on STN

RN 597533-65-8 REGISTRY

ED Entered STN: 03 Oct 2003  
CN 1-Hexanone, 3-ethenyl-1-(4-methyl-3-cyclohexen-1-yl)- (CA INDEX NAME)  
MF C15 H24 O  
SR CA  
LC STN Files: CA, CAPLUS, USPATFULL

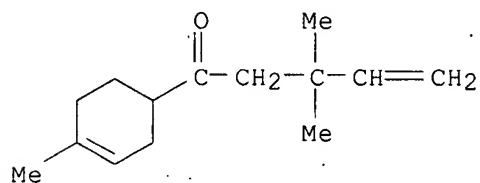


\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 139:245701

L51 ANSWER 2 OF 5 REGISTRY COPYRIGHT 2007 ACS on STN  
RN 597533-64-7 REGISTRY  
ED Entered STN: 03 Oct 2003  
CN 4-Penten-1-one, 3,3-dimethyl-1-(4-methyl-3-cyclohexen-1-yl)- (CA INDEX NAME)  
MF C14 H22 O  
SR CA  
LC STN Files: CA, CAPLUS, USPATFULL



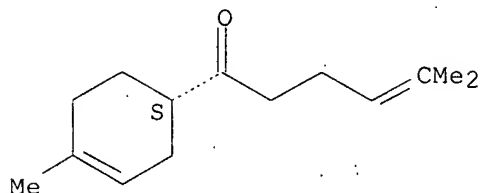
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 139:245701

L51 ANSWER 3 OF 5 REGISTRY COPYRIGHT 2007 ACS on STN  
RN 170080-86-1 REGISTRY  
ED Entered STN: 15 Nov 1995  
CN 4-Hexen-1-one, 5-methyl-1-(4-methyl-3-cyclohexen-1-yl)-, (S)- (9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C14 H22 O  
SR CA  
LC STN Files: CA, CAPLUS, CASREACT

Absolute stereochemistry.

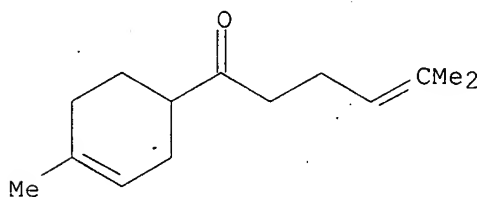


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1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 123:314184

L51 ANSWER 4 OF 5 REGISTRY COPYRIGHT 2007 ACS on STN  
RN 76280-88-1 REGISTRY  
ED Entered STN: 16 Nov 1984  
CN 4-Hexen-1-one, 5-methyl-1-(4-methyl-3-cyclohexen-1-yl)- (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN 4-Hexen-1-one, 5-methyl-1-(4-methyl-3-cyclohexen-1-yl)-, (±)-  
DR 4891-80-9  
MF C14 H22 O  
LC STN Files: BEILSTEIN\*, CA, CAOLD, CAPLUS, CASREACT, SPECINFO  
(\*File contains numerically searchable property data)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

17 REFERENCES IN FILE CA (1907 TO DATE)  
17 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 131:310260

REFERENCE 2: 122:240011

REFERENCE 3: 121:205714

REFERENCE 4: 111:78402

REFERENCE 5: 107:176247

REFERENCE 6: 107:115804

REFERENCE 7: 103:160708

REFERENCE 8: 99:38666

REFERENCE 9: 97:24022

REFERENCE 10: 95:62434

L51 ANSWER 5 OF 5 REGISTRY COPYRIGHT 2007 ACS on STN

RN 59175-60-9 REGISTRY

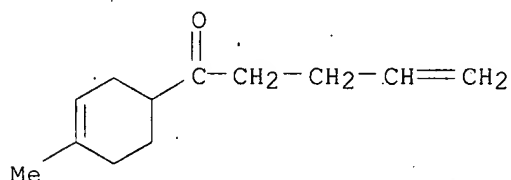
ED Entered STN: 16 Nov 1984

CN 4-Penten-1-one, 1-(4-methyl-3-cyclohexen-1-yl)- (9CI) (CA INDEX NAME)

MF C12 H18 O

LC STN Files: BEILSTEIN\*, CA, CAPLUS, USPATFULL

(\*File contains numerically searchable property data)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

3 REFERENCES IN FILE CA (1907 TO DATE)

3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 139:245701

REFERENCE 2: 87:184046

REFERENCE 3: 84:179728

=> fil hcaold

FILE 'HCAOLD' ENTERED AT 13:14:58 ON 27 NOV 2007

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PRE-1967 CHEMICAL ABSTRACTS FILE WITH HOUR-BASED PRICING

FILE COVERS 1907-1966

FILE LAST UPDATED: 01 May 1997 (19970501/UP)

This file contains CAS Registry Numbers for easy and accurate substance identification. Title keywords, authors, patent assignees, and patent information, e.g., patent numbers, are now searchable from 1907-1966. TIFF images of CA abstracts printed between 1907-1966 are available in the PAGE display formats.

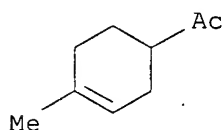
New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file supports REGISTRY for direct browsing and searching of all substance data from the REGISTRY file. Enter HELP FIRST for

more information.

=> d 154 all hitstr tot

L54 ANSWER 1 OF 2 HCAOLD COPYRIGHT 2007 ACS on STN  
AN CA64:19687h CAOLD  
TI terpenoids - (X) synthesis of  $\beta$ -bisabolene and dipentene  
AU Vig, Om P.; Matta, K. L.; Singh, G.; Raj, I.  
IT 495-61-4 4891-80-9 6090-08-0 6090-09-1  
6090-10-4 6090-11-5 6157-43-3 21902-26-1 27687-87-2  
IT 4891-80-9 6090-09-1  
RN 4891-80-9 HCAOLD  
RN 6090-09-1 HCAOLD  
CN Ethanone, 1-(4-methyl-3-cyclohexen-1-yl)- (CA INDEX NAME)



L54 ANSWER 2 OF 2 HCAOLD COPYRIGHT 2007 ACS on STN  
AN CA64:8246h CAOLD  
TI syntheses of ( $\pm$ )- $\beta$ -bisabolene and 2-p-tolyl-6-methylhepta-1,5-diene  
AU Manjarrez Moreno, Armando; Guzman, A.  
IT 4871-90-3 4871-91-4 4891-77-4 4891-79-6 4891-80-9  
4999-58-0 21902-26-1  
IT 4891-80-9  
RN 4891-80-9 HCAOLD

=> fil hcaplus

FILE 'HCAPLUS' ENTERED AT 13:15:28 ON 27 NOV 2007  
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FILE COVERS 1907 - 27 Nov 2007 VOL 147 ISS 23  
FILE LAST UPDATED: 26 Nov 2007 (20071126/ED)

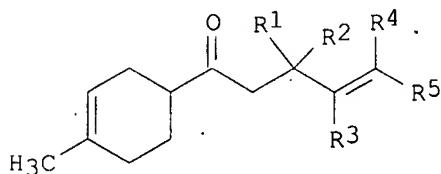
New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification:

=&gt; d 174 bib abs hitind hitstr retable

L74 ANSWER 1 OF 1 HCAPLUS. COPYRIGHT 2007 ACS on STN  
 AN 2003:757673 HCAPLUS  
 DN 139:245701  
 TI Preparation and use of unsaturated ketones as fragrances for  
**perfumes**  
 IN Markert, Thomas; Porrmann, Volker; Rittler,  
 Frank  
 PA Cognis Deutschland G.m.b.H. & Co. K.-G., Germany  
 SO PCT Int. Appl., 23 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA German  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003078391	A1	20030925	WO 2003-EP1561	20030217 <--
	W: IL, JP, SG, US				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR				
	DE 10212026	A1	20031002	DE 2002-10212026	20020319 <--
	EP 1485350	A1	20041215	EP 2003-744331	20030217 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, CY, TR, BG, CZ, EE, HU, SK				
	JP 2005520875	T	20050714	JP 2003-576397	20030217 <--
	US 2005119158	A1	20050602	US 2005-507203	20050124 <--
PRAI	DE 2002-10212026	A	20020319	<--	
	WO 2003-EP1561	W	20030217	<--	
OS	MARPAT 139:245701				
GI					



AB Unsatd. ketones [I; R1-R4 = H, (un)satd, (un)branched C1-6 alkyl, cyclic group] are prepared and have interesting and original **odor** characteristics, with good emanation, suitable for use in **perfumes**, etc., are prepared by the reaction of (un)saturated alkenols, having a hydroxyl group alpha to the double bond, with either 1-acetyl-4-methyl-3-cyclohexene or 1-[1,1-di(ethoxy)ethyl]-4-methyl-3-cyclohexene in the presence of an acid catalyst. Thus, 1-acetyl-4-methyl-3-cyclohexene was reacted with allyl alc. in the presence of sulfuric acid to give 1-(4-methylcyclohex-3-en-1-yl)-4-penten-1-one, which had a fruity, green **odor** with a weak rhubarb after note.

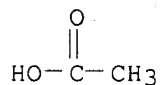
IC ICM C07C0403-16  
 ICS C11B0009-00; A61K0007-46

CC 24-5 (Alicyclic Compounds)  
 Section cross-reference(s): 62

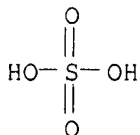
ST unsatd ketone fragrance prepn **perfume**;



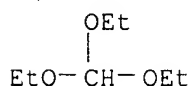
- methylocyclohexenylpentenone fragrance prepn
- IT Alcohols, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (alkenols; preparation of unsatd. ketones as fragrances for perfumes  
 by the reaction of 1-acetyl-4-  
 methyl-3-cyclohexene or 1-[1,1-di  
 (ethoxy)ethyl]-4-methyl-3-  
 cyclohexene with)
- IT Perfumes  
 (preparation and use of unsatd. ketones as fragrances in perfumes)
- IT Acids, uses  
 RL: CAT (Catalyst use); USES (Uses)  
 (preparation and use of unsatd. ketones as fragrances in perfumes  
 using as catalysts)
- IT Odor and Odorous substances  
 (unsatd. ketones; preparation and use of unsatd. ketones as fragrances in  
 perfumes)
- IT Ketones, preparation  
 RL: COS (Cosmetic use); PRP (Properties); SPN (Synthetic preparation);  
 BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (unsatd.; preparation and use of unsatd. ketones as fragrances in  
 perfumes)
- IT 64-19-7, Acetic acid, uses 7664-93-9, Sulfuric acid,  
 uses  
 RL: CAT (Catalyst use); USES (Uses)  
 (in the preparation and use of unsatd. ketones as fragrances for  
 perfumes)
- IT 122-51-0, Triethyl orthoformate  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (in the preparation and use of unsatd. ketones as fragrances for  
 perfumes)
- IT 107-18-6, Allyl alcohol, reactions 556-82-1,  
 3-Methyl-2-buten-1-ol 928-95-0, trans-2-Hexen-1-ol  
 6090-09-1 597533-66-9  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (in the preparation and use of unsatd. ketones as fragrances for  
 perfumes)
- IT 59175-60-9P 597533-64-7P 597533-65-8P  
 RL: COS (Cosmetic use); PRP (Properties); SPN (Synthetic preparation);  
 BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (preparation and use of unsatd. ketones as fragrances for perfumes  
 )
- IT 64-19-7, Acetic acid, uses 7664-93-9, Sulfuric acid,  
 uses  
 RL: CAT (Catalyst use); USES (Uses)  
 (in the preparation and use of unsatd. ketones as fragrances for  
 perfumes)
- RN 64-19-7 HCAPLUS  
 CN Acetic acid (CA INDEX NAME)



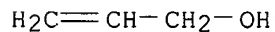
RN 7664-93-9 HCAPLUS  
 CN Sulfuric acid (CA INDEX NAME)



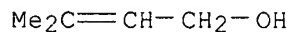
IT 122-51-0, Triethyl orthoformate  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (in the preparation and use of unsatd. ketones as fragrances for  
**perfumes**)  
 RN 122-51-0 HCAPLUS  
 CN Ethane, 1,1',1''-[methylidynetris(oxy)]tris- (CA INDEX NAME)



IT 107-18-6, Allyl alcohol, reactions 556-82-1,  
 3-Methyl-2-buten-1-ol 928-95-0, trans-2-Hexen-1-ol  
 6090-09-1 597533-66-9  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (in the preparation and use of unsatd. ketones as fragrances for  
**perfumes**)  
 RN 107-18-6 HCAPLUS  
 CN 2-Propen-1-ol (CA INDEX NAME)

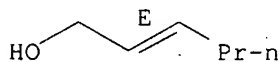


RN 556-82-1 HCAPLUS  
 CN 2-Buten-1-ol, 3-methyl- (CA INDEX NAME)

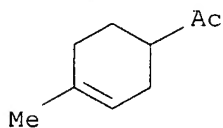


RN 928-95-0 HCAPLUS  
 CN 2-Hexen-1-ol, (2E)- (CA INDEX NAME)

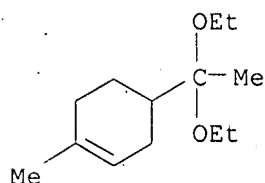
Double bond geometry as shown.



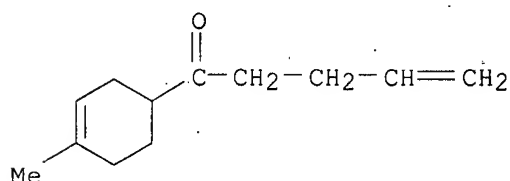
RN 6090-09-1 HCAPLUS  
 CN Ethanone, 1-(4-methyl-3-cyclohexen-1-yl)- (CA INDEX NAME)



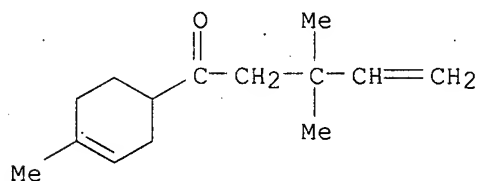
RN 597533-66-9 HCAPLUS  
 CN Cyclohexene, 4-(1,1-diethoxyethyl)-1-methyl- (CA INDEX NAME)



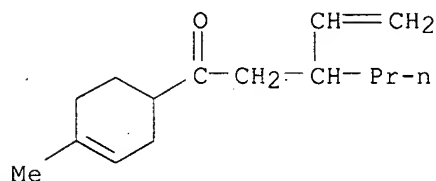
IT 59175-60-9P 597533-64-7P 597533-65-8P  
 RL: COS (Cosmetic use); PRP (Properties); SPN (Synthetic preparation);  
 BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (preparation and use of unsatd. ketones as fragrances for perfumes)  
 RN 59175-60-9 HCAPLUS  
 CN 4-Penten-1-one, 1-(4-methyl-3-cyclohexen-1-yl)- (9CI) (CA INDEX NAME)



RN 597533-64-7 HCAPLUS  
 CN 4-Penten-1-one, 3,3-dimethyl-1-(4-methyl-3-cyclohexen-1-yl)- (CA INDEX NAME)



RN 597533-65-8 HCAPLUS  
 CN 1-Hexanone, 3-ethenyl-1-(4-methyl-3-cyclohexen-1-yl)- (CA INDEX NAME)



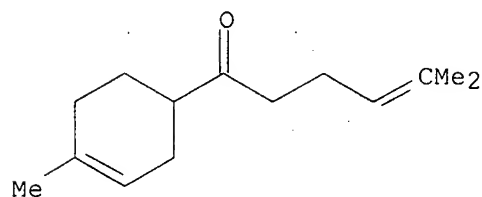
RETABLE

Referenced Author | Year | VOL | PG | Referenced Work | Referenced

(RAU)	(RPY)	(RVL)	(RPG)	(RWK)	File
Firmenich & Cie	1977			CH 586551 A	HCAPLUS
Fujita, T	1977	26	429	YUKAGAKU	HCAPLUS
Ho, T	1981	11	237	SYNTHETIC COMMUNICAT	HCAPLUS
Thomas, A	1983			US 4392993 A	HCAPLUS
Watanabe, S	1975	25	733	JOURNAL OF APPLIED C	HCAPLUS

=> d 177 bib abs hitstr retable tot

L77 ANSWER 1 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1999:532934 HCAPLUS  
 DN 131:310260  
 TI Regioselective  $\alpha$ -alkylation of silyl enolates using a mild catalyst-ZnCl<sub>2</sub> doped on acidic alumina  
 AU Kad, G. L.; Singh, Vasundhara; Khurana, Anupam; Chaudhary, Sangeeta; Singh, Jasvinder  
 CS Department of Chemistry, Panjab University, Chandigarh, 160014, India  
 SO Synthetic Communications (1999), 29(19), 3439-3442  
 CODEN: SYNCAV; ISSN: 0039-7911  
 PB Marcel Dekker, Inc.  
 DT Journal  
 LA English  
 OS CASREACT 131:310260  
 AB ZnCl<sub>2</sub> doped acidic alumina used as a solid support acts as a better Lewis acid catalyst in the S<sub>N</sub>1 reaction of tri-Me silyl enol ethers with tertiary, allylic, and benzylic halides to yield exclusively the substituted product in excellent yields. Thus, treatment of 1-(trimethylsiloxy)cyclohexene with PhCH<sub>2</sub>Br in the presence of ZnCl<sub>2</sub>/alumina gave 2-benzylcyclohexanone in 65% yield. This method was also employed for the synthesis of the monocyclic sesquiterpene hydrocarbon, ( $\pm$ )- $\beta$ -bisabolene, and 2,6-dimethyl-7-octen-4-one.  
 IT 76280-88-1P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (regioselective  $\alpha$ -alkylation of silyl enolates by benzylic, allylic, and tertiary halides catalyzed by ZnCl<sub>2</sub>-doped acidic alumina)  
 RN 76280-88-1 HCAPLUS  
 CN 4-Hexen-1-one, 5-methyl-1-(4-methyl-3-cyclohexen-1-yl)- (9CI) (CA INDEX NAME)



# RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Jones, T	1925	127	2530	J Chem Soc	
Pliva, J	1951	16	158	Collin Trav Chim Tch	HCAPLUS
Tsukasa	1982	31	615	Yokagaku	HCAPLUS
Tsukasa	1984	33	233	Yokagaku	HCAPLUS

Vig, O |1970 |8 |107 |Ind J Chem |HCAPLUS  
Vig, O |1971 |48 |1993 |J Indian Chem Soc |HCAPLUS

L77 ANSWER 2 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 1995:752749 HCAPLUS

DN 123:314184

TI Asymmetric synthesis of highly enantiomerically enriched  
(S)-(-)- $\beta$ -bisabolene

AU Argenti, Laura; Bellina, Fabio; Carpita, Adriano; Rossi, Renzo

CS Dipartimento di Chimica e Chimica Industriale, Universita di Pisa, Pisa,  
I-56126, Italy

SO Synthetic Communications (1995), 25(19), 2909-21

CODEN: SYNCAV; ISSN: 0039-7911

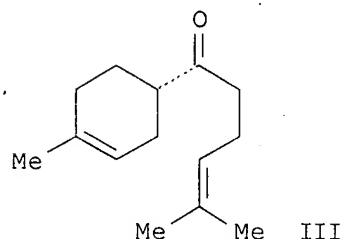
PB Dekker

DT Journal

LA English

OS CASREACT 123:314184

GI



AB (S)- $\beta$ -bisabolene (I) was synthesized by a route in which  
(S)-4-methyl-3-cyclohexene carboxylic acid (II), which was the key  
intermediate, was prepared via a highly diastereoselective  $\text{TiCl}_4$ -catalyzed  
Diels-Alder reaction between isoprene and the acrylate of com.  
(R)-pantolactone, followed by hydrolysis. II was then converted into  
ketone III using two different procedures. The best one of these, as  
regards the degree of stereospecificity, involved the reaction of II with  
2 equiv of 4-methyl-3-penten-1-yl lithium in the presence of  $\text{CeCl}_3$ , and  
gave III in appr. 84% ee. The Zr-promoted methylenation of III afforded  
highly enantiomerically enriched I.

IT 170080-86-1P

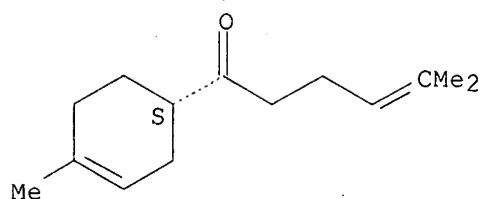
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)

(asym. synthesis of highly enantiomerically enriched  
(S)-(-)- $\beta$ -bisabolene)

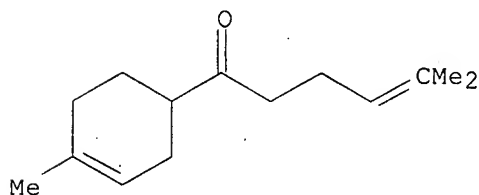
RN 170080-86-1 HCAPLUS

CN 4-Hexen-1-one, 5-methyl-1-(4-methyl-3-cyclohexen-1-yl)-, (S)- (9CI) (CA  
INDEX NAME)

Absolute stereochemistry.

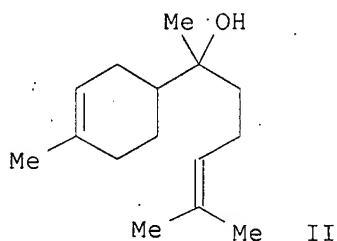
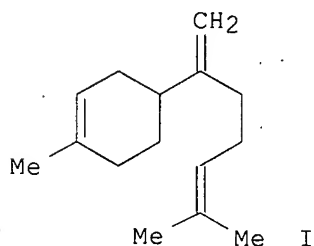


L77 ANSWER 3 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1995:257039 HCAPLUS  
 DN 122:240011  
 TI Termite trail attractants: new syntheses of racemic (E)- $\alpha$ -,  
 (Z)- $\alpha$ - and  $\beta$ -bisabolenes  
 AU Argenti, Laura; Bellina, Fabio; Carpita, Adriano; Dell'Amico, Nicola;  
 Rossi, Renzo  
 CS Dipartimento di Chimica e Chimica Industriale, Universita di Pisa, Pisa,  
 I-56126, Italy  
 SO Synthetic Communications (1994), 24(22), 3167-88  
 CODEN: SYNCAV; ISSN: 0039-7911  
 PB Dekker  
 DT Journal  
 LA English  
 OS CASREACT 122:240011  
 AB Racemic (E)- $\alpha$ -bisabolene was synthesized starting from  
 4-methyl-3-cyclohexenecarboxylic acid by a reaction sequence involving the  
 Pd(0)-catalyzed cross-coupling reaction between the (E)-2-(4-methyl-3-  
 cyclohexen-1-yl)-1-propenyltrimethylstannane and 3-methyl-2-buten-1-yl  
 acetate. Three different procedures, in which a common precursor was used  
 as key intermediate, were tested for the synthesis of racemic  
 (Z)- $\alpha$ -bisabolene. The best one, which involved the reaction between  
 (Z)-1-bromo-3-(4-methyl-3-cyclohexen-1-yl)-2-butene and  $[\text{Me}_2\text{C}:\text{CH}]_2\text{CuLi}$ ,  
 afforded a mixture of (Z)- and (E)- $\alpha$ -bisabolene in 93:7 molar ratio.  
 Finally, racemic  $\beta$ -bisabolene was synthesized by a simple reaction  
 sequence involving the Zr-promoted methylenation of 2-methyl-6-oxo-(4-  
 methyl-3-cyclohexen-1-yl)-2-hexene.  
 IT 76280-88-1P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (new syntheses of racemic (E)- $\alpha$ -, (Z)- $\alpha$ - and  
 $\beta$ -bisabolenes)  
 RN 76280-88-1 HCAPLUS  
 CN 4-Hexen-1-one, 5-methyl-1-(4-methyl-3-cyclohexen-1-yl)- (9CI) (CA INDEX  
 NAME)

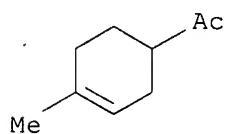


L77 ANSWER 4 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1994:605714 HCAPLUS

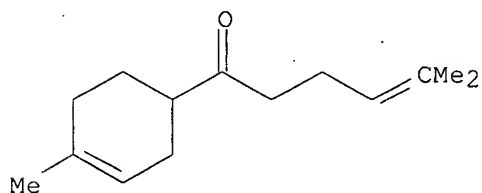
DN 121:205714  
 TI Total synthesis of ( $\pm$ )- $\beta$ -bisabolene and ( $\pm$ )- $\alpha$ -bisabolol  
 AU Wang, Huichen; Huang, Zhixi  
 CS Fragrance Industry Inst., Ministry of Light Industry, Shanghai, Peop. Rep. China  
 SO Huaxue Shijie (1993), 34(7), 308-11  
 CODEN: HUAKAB; ISSN: 0367-6358  
 DT Journal  
 LA Chinese  
 GI



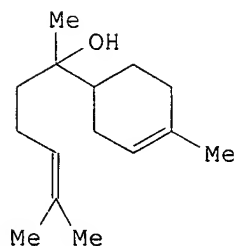
AB Title compds. I and II were prepared in 15.9 and 16.7% yield resp. starting from Diels-Alder reaction of CH<sub>2</sub>:CMeCH:CH<sub>2</sub> with CH<sub>2</sub>:CHCOMe.  
 IT **6090-09-1P**  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and alkylation of)  
 RN 6090-09-1 HCAPLUS  
 CN Ethanone, 1-(4-methyl-3-cyclohexen-1-yl)- (CA INDEX NAME)



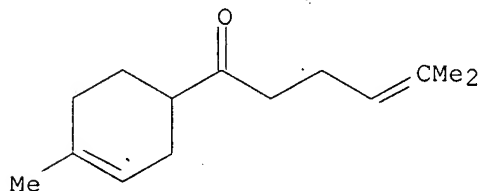
IT **76280-88-1P**  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and methylenation of)  
 RN 76280-88-1 HCAPLUS  
 CN 4-Hexen-1-one, 5-methyl-1-(4-methyl-3-cyclohexen-1-yl)- (9CI) (CA INDEX NAME)



L77 ANSWER 5 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN  
AN 1989:478402 HCAPLUS  
DN 111:78402  
TI Organomanganese(II) reagents. XIV. A short and efficient synthesis of  
diastereoisomeric ( $\pm$ )- $\alpha$ -bisabolols and ( $\pm$ )-chlorphenoxamine  
AU Cahiez, Gerard; Rivas-Enterrios, Jose; Clery, Patrick  
CS Lab. Chim. Organoelem., Univ Pierre et Marie Curie, Paris, F-75252, Fr.  
SO Tetrahedron Letters (1988), 29(30), 3659-62  
CODEN: TELEAY; ISSN: 0040-4039  
DT Journal  
LA English  
OS CASREACT 111:78402  
GI



AB Diastereoisomeric ( $\pm$ )- $\alpha$ -bisabolols I, a sesquiterpenoid alc., and  
( $\pm$ )-4-ClC<sub>6</sub>H<sub>4</sub>CMePhOCH<sub>2</sub>CH<sub>2</sub>NMe<sub>2</sub>, an antihistamine, were prepared in  
excellent yields. Both syntheses involve as a key step the one-pot  
elaboration of an unsym. tertiary alc. via an organomanganese reagent,  
i.e. Me<sub>2</sub>C:CHCH<sub>2</sub>CH<sub>2</sub>MnBr to I and p-ClC<sub>6</sub>H<sub>4</sub>COCl and PhMnBr to  
p-ClC<sub>6</sub>H<sub>4</sub>CMePhOH.  
IT 76280-88-1P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation and carbonyl methylation of)  
RN 76280-88-1 HCAPLUS  
CN 4-Hexen-1-one, 5-methyl-1-(4-methyl-3-cyclohexen-1-yl)- (9CI) (CA INDEX  
NAME)

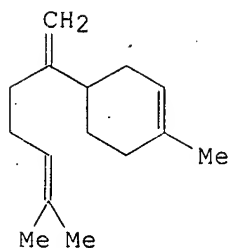


L77 ANSWER 6 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN  
AN 1987:576247 HCAPLUS  
DN 107:176247  
TI New synthesis of  $\beta$ -bisabolene via 1-(4-methyl-3-cyclohexenyl)-1-

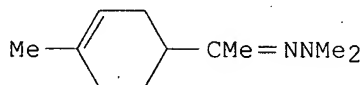


ethanone N,N-dimethylhydrazone

AU Yamashita, Masakazu; Matsumiya, Kaoru; Tanji, Katsumi; Suemitsu, Rikisaku  
 CS Dep. Appl. Chem., Doshisha Univ., Kyoto, 602, Japan  
 SO Yukagaku (1986), 35(12), 1041-3  
 CODEN: YK GKAM; ISSN: 0513-398X  
 DT Journal  
 LA English  
 OS CASREACT 107:176247  
 GI



I



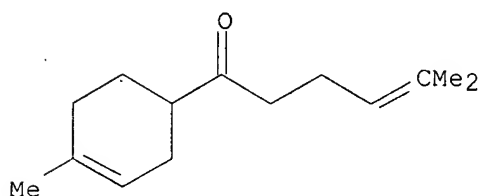
II

AB A convenient synthesis of  $\beta$ -bisabolene (I), the component of the essential oil of lemon, lime, bergamot, etc., was synthesized in 5 steps starting from Me vinyl ketone and isoprene via N,N-dimethylhydrazone II.

IT **76280-88-1P**  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and Wittig reaction of, with methyltriphenylphosphonium bromide)

RN 76280-88-1 HCAPLUS

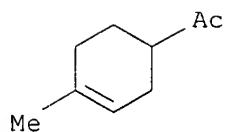
CN 4-Hexen-1-one, 5-methyl-1-(4-methyl-3-cyclohexen-1-yl)- (9CI) (CA INDEX NAME)



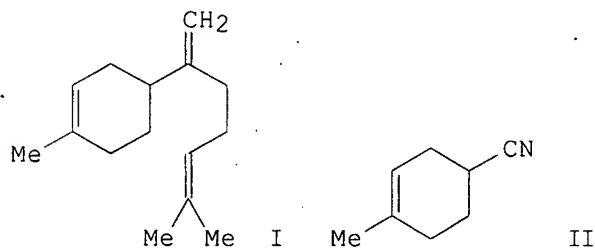
IT **6090-09-1P**  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and reaction with dimethylhydrazine)

RN 6090-09-1 HCAPLUS

CN Ethanone, 1-(4-methyl-3-cyclohexen-1-yl)- (CA INDEX NAME)



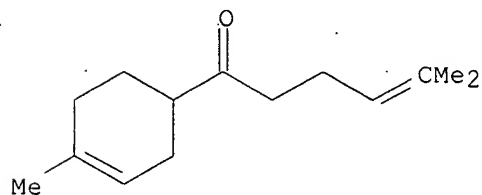
L77 ANSWER 7 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1987:515804 HCAPLUS  
 DN 107:115804  
 TI New synthesis of ( $\pm$ )- $\beta$ -bisabolene  
 AU Wu, Dajun; Dan, Yanshe; Yan, Binchun  
 CS Dep. Fine Chem., East China Inst. Chem. Technol., Shanghai, Peop. Rep. China  
 SO Huadong Huagong Xueyuan Xuebao (1985), 11(4), 447-50  
 CODEN: HHKPDM; ISSN: 0253-9683  
 DT Journal  
 LA Chinese  
 GI



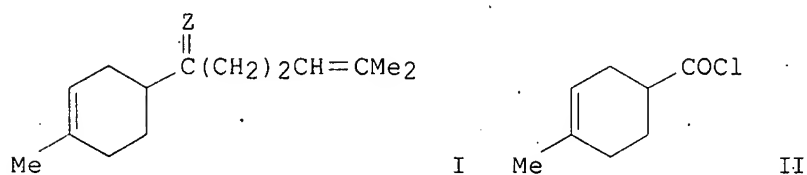
AB The title compound (I, X = CH<sub>2</sub>) was prepared in 3 steps in 40% yield by Diels-Alder reaction of H<sub>2</sub>C:CMeCH:CH<sub>2</sub> with H<sub>2</sub>C:CHCN, Grignard reaction of cyanocyclohexene II with Me<sub>2</sub>C:CHCH<sub>2</sub>CH<sub>2</sub>MgI, and methylenation of I (X = O) with Ph<sub>3</sub>P+MeBr-.

IT **76280-88-1P**  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and methylenation of)

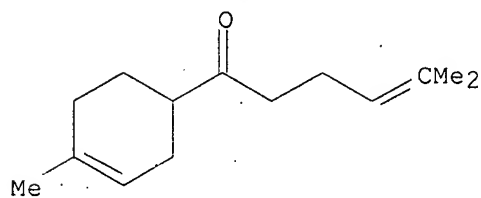
RN 76280-88-1 HCAPLUS  
 CN 4-Hexen-1-one, 5-methyl-1-(4-methyl-3-cyclohexen-1-yl)- (9CI) (CA INDEX NAME)



L77 ANSWER 8 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1985:560708 HCAPLUS  
 DN 103:160708  
 TI Total synthesis of ( $\pm$ )- $\beta$ -bisabolene  
 AU Duan, Yongxi; Wu, Dajun; Chu, Jiyu; Wang, Meili; Yan, Binchun  
 CS East China Inst. Chem. Technol., Shanghai, Peop. Rep. China  
 SO Yiyao Gongye (1985), 16(3), 120-2  
 CODEN: YIGODN; ISSN: 0255-7223  
 DT Journal  
 LA Chinese  
 GI



AB ( $\pm$ )- $\beta$ -Bisabolene (I, Z = CH<sub>2</sub>) was prepared by Grignard coupling of the cyclohexenylcarbonyl chloride II with Me<sub>2</sub>C:CH(CH<sub>2</sub>)<sub>2</sub>Br in the presence of CuCl and Wittig methylenation as the resulting I (Z = O).  
 IT **76280-88-1P**  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and Wittig methylenation of)  
 RN 76280-88-1 HCAPLUS  
 CN 4-Hexen-1-one, 5-methyl-1-(4-methyl-3-cyclohexen-1-yl)- (9CI) (CA INDEX NAME)



L77 ANSWER 9 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1983:438666 HCAPLUS  
 DN 99:38666  
 TI Chemistry of organosilicon compounds - 165. 2-(Trimethylsilylmethyl)-1,3-butadiene - a versatile building block for terpene synthesis  
 AU Sakurai, Hideki; Hosomi, Akira; Saito, Masaki; Sasaki, Koshi; Iguchi, Hirokazu; Sasaki, Junichi; Araki, Yoshitaka  
 CS Dep. Chem., Tohoku Univ., Sendai, 980, Japan  
 SO Tetrahedron (1983), 39(6), 883-94  
 CODEN: TETRAB; ISSN: 0040-4020  
 DT Journal  
 LA English  
 AB Me<sub>3</sub>SiCH<sub>2</sub>C(:CH<sub>2</sub>)CH:CH<sub>2</sub>, prepared by Grignard coupling of Me<sub>3</sub>SiCH<sub>2</sub>Cl with CH<sub>2</sub>:C(Cl)CH:CH<sub>2</sub>, isoprenylated acid chlorides, aldehydes, ketones, and

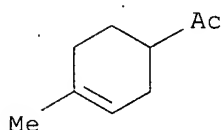
acetals in the presence of Lewis acids and underwent Diels-Alder reaction with dienophiles with high regiospecificity to give synthons for limonene,  $\delta$ -terpineol, isobisabolene, etc.

IT 6090-09-1P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 6090-09-1 HCAPLUS

CN Ethanone, 1-(4-methyl-3-cyclohexen-1-yl)- (CA INDEX NAME)

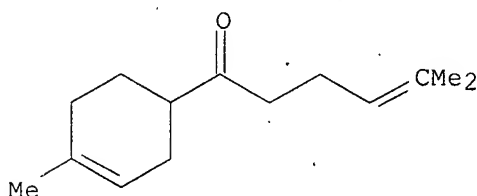


IT 76280-88-1P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of, via Diels-Alder reaction of isoprenylsilane with methyloctadienone)

RN 76280-88-1 HCAPLUS

CN 4-Hexen-1-one, 5-methyl-1-(4-methyl-3-cyclohexen-1-yl)- (9CI) (CA INDEX NAME)



L77 ANSWER 10 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 1982:424022 HCAPLUS

DN 97:24022

TI Chemistry of organosilicon compounds. 152. Highly regioselective Diels-Alder reactions of 2-trimethylsilylmethyl-1,3-butadiene catalyzed by a Lewis acid and applications to syntheses of terpenes

AU Hosomi, Akira; Iguchi, Hirokazu; Sasaki, Junichi; Sakurai, Hideki

CS Dep. Chem., Tohoku Univ., Sendai, 980, Japan

SO Tetrahedron Letters (1982), 23(5), 551-4

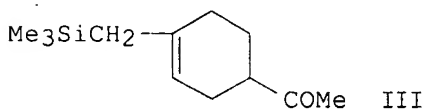
CODEN: TELEAY; ISSN: 0040-4039

DT Journal

LA English

OS CASREACT 97:24022

GI



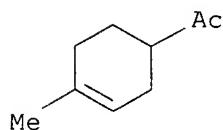
AB CH<sub>2</sub>:C(CH<sub>2</sub>SiMe<sub>3</sub>)CH:CH<sub>2</sub> (I) undergoes highly regioselective Diels-Alder reactions with dienophiles, e.g. acrolein and CH<sub>2</sub>:CHCOMe (II), in the presence of AlCl<sub>3</sub> to give "para" isomers almost exclusively. The adducts are readily converted to a variety of mono- and sesquiterpenes. E.g., I with II and AlCl<sub>3</sub> in C<sub>6</sub>H<sub>6</sub> at 15-20° for 3.5 h gave 64% of the adduct III. Methylenation of III followed by regioselective protodesilylation with HCl in MeOH or CsF in DMSO gave p-mentha-1(7),8-diene and limonene, resp. Desilylation followed by methylation with MeMgBr gave α- and δ-terpineol, resp. Similarly, the adduct of I with 7-methylocta-1,6-dien-3-one and cryptone, resp., were converted to derivs. of bisabolanes and cadinanes.

IT 6090-09-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and methylation of, terpeneol by)

RN 6090-09-1 HCAPLUS

CN Ethanone, 1-(4-methyl-3-cyclohexen-1-yl)- (CA INDEX NAME)

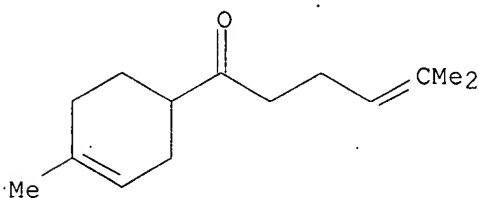


IT 76280-88-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation, methylation, and methylenation of)

RN 76280-88-1 HCAPLUS

CN 4-Hexen-1-one, 5-methyl-1-(4-methyl-3-cyclohexen-1-yl)- (9CI) (CA INDEX NAME)



L77 ANSWER 11 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 1981:462434 HCAPLUS

DN 95:62434

TI β-Bisabolene synthesis: Carroll approach

AU Ho, Tse-Lok

CS Org. Chem. Div., SCM Corp., Jacksonville, FL, 32201, USA

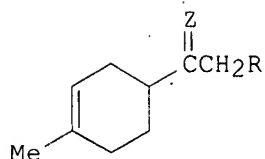
SO Synthetic Communications (1981), 11(3), 237-9

CODEN: SYNCAV; ISSN: 0039-7911

DT Journal

LA English

GI



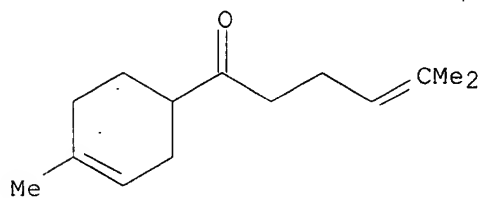
I

AB Carroll reaction of the keto ester I ( $Z = O$ ,  $R = CO_2Et$ ) with 1.5 equiv  $HOCHMe_2CH:CH_2$  at  $150-70^\circ$  in the presence of 1 mol %  $Al(OCHMe_2)_3$  gave .56% norbisabolene I ( $Z = O$ ,  $R = CH_2CH:CMe_2$ ), whose Wittig methylenation gave  $\beta$ -bisabolene (I,  $Z = CH_2$ ,  $R = CH_2CH:CMe_2$ ).

IT **76280-88-1P**  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and Wittig methylenation of)

RN 76280-88-1 HCAPLUS

CN 4-Hexen-1-one, 5-methyl-1-(4-methyl-3-cyclohexen-1-yl)- (9CI) (CA INDEX NAME)



L77 ANSWER 12 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 1981:47520 HCAPLUS

DN 94:47520

TI Synthesis of ( $\pm$ )- $\beta$ -bisabolene

AU Ho, Tse-Lok; Liu, Shing-Hou

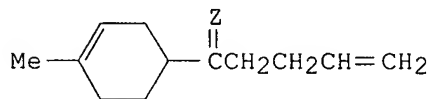
CS Org. Chem. Div., SCM Corp., Jacksonville, FL, 32201, USA

SO Synthetic Communications (1980), 10(8), 603-5  
 CODEN: SYNCAV; ISSN: 0039-7911

DT Journal

LA English

GI

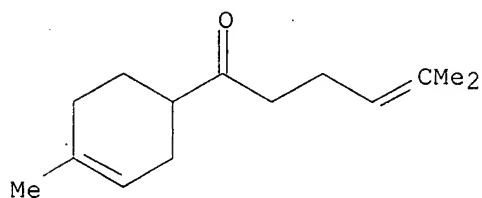


I

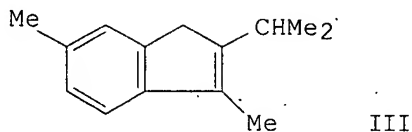
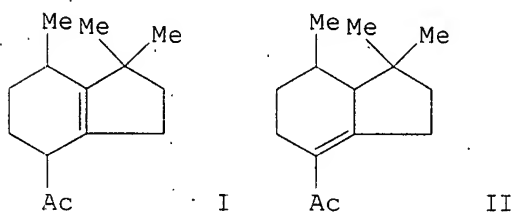
AB ( $\pm$ )- $\beta$ -Bisabolene I ( $Z = CH_2$ ) was prepared by pyrolysis of nopinone, Diels-Alder reaction of  $CH_2:CHCOCH_2CH_2CH:CMe_2$  with isoprene, and Wittig methylenation of I ( $Z = O$ ).

IT **76280-88-1P**  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and methylenation of)

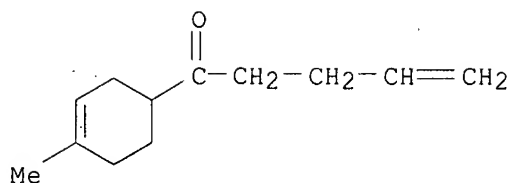
RN 76280-88-1 HCAPLUS  
 CN 4-Hexen-1-one, 5-methyl-1-(4-methyl-3-cyclohexen-1-yl)- (9CI) (CA INDEX NAME)



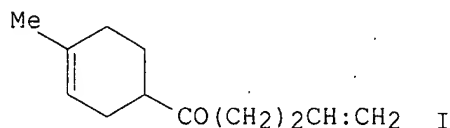
L77 ANSWER 13 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1977:584046 HCAPLUS  
 DN 87:184046  
 OREF 87:29067a,29070a  
 TI Synthesis of new cyclohexenyl ketones from various conjugated diene hydrocarbons  
 AU Fujita, Tsutomu; Watanabe, Shoji; Suga, Kyoichi; Yokoyama, Toshiro  
 CS Fac. Eng., Chiba Univ., Chiba, Japan  
 SO Yukagaku (1977), 26(7), 429-32  
 CODEN: YKGKAM; ISSN: 0513-398X  
 DT Journal  
 LA Japanese  
 GI



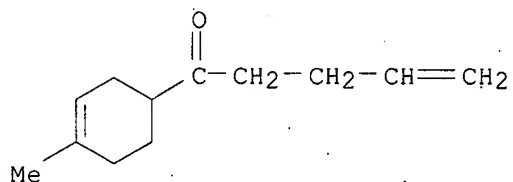
AB New cyclohexenyl alkenyl ketones were obtained by the reaction of various Me cyclohexene carboxylates and  $\text{CH}_2\text{:CHMgCl}$ . E.g., 1-(4-methyl-3-cyclohexen-1-yl)-4-penten-1-one was produced from Me 4-methyl-3-cyclohexene-1-carboxylate and  $\text{CH}_2\text{:CHMgCl}$ . Several hydroindene derivs. were prepared from  $\text{CH}_2\text{:CMeCH:CHCH}_2\text{CH}_2\text{CMe:CH}_2$  via Diels-Alder reaction followed by acidic cyclization. E.g., I-III were obtained by the cyclization of 4-acetyl-1-methyl-3-(3-methyl-3-butenyl)-1-cyclohexene.  
 IT 59175-60-9P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 59175-60-9 HCAPLUS  
 CN 4-Penten-1-one, 1-(4-methyl-3-cyclohexen-1-yl)- (9CI) (CA INDEX NAME)



L77 ANSWER 14 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1976:179728 HCAPLUS  
 DN 84:179728  
 OREF 84:29115a,29118a  
 TI A new preparative method for cyclohexenyl alkenyl ketones  
 AU Watanabe, Shoji; Fujita, Tsutomu; Suga, Kyoichi; Yokoyama, Toshiro  
 CS Dep. Appl. Chem., Chiba Univ., Chiba, Japan  
 SO Journal of Applied Chemistry & Biotechnology (1975), 25(10), 733-6  
 CODEN: JACBBD; ISSN: 0375-9210  
 DT Journal  
 LA English  
 GI



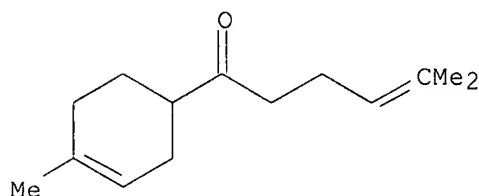
AB Me cyclohexenylcarboxylate, prepared by  $\text{AlCl}_3$ -catalyzed reaction of  $\text{CH}_2:\text{CMeCH}:\text{CH}_2$  with  $\text{CH}_2:\text{CHCO}_2\text{Me}$ , reacted with  $\text{CH}_2:\text{CHMgCl}$  in refluxing THF to give 1-oxo-4-pentene I. Other  $\gamma,\delta$ -unsatd. cyclic esters, prepared by similar methods, reacted similarly to give sweet smelling ketones. At  $30^\circ$  3-hydroxy-3-(4'-methyl-3'-cyclohexene-1'-yl)-1,4-pentadiene was also produced as a by-product with I.  
 IT **59175-60-9P**  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 59175-60-9 HCAPLUS  
 CN 4-Penten-1-one, 1-(4-methyl-3-cyclohexen-1-yl)- (9CI) (CA INDEX NAME)



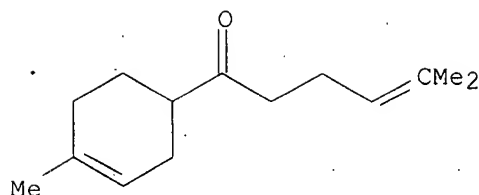
L77 ANSWER 15 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1972:72664 HCAPLUS  
 DN 76:72664



OREF 76:11705a,11708a  
 TI Terpenoids. LVIII. New syntheses of isobisabolene,  $\beta$ -bisabolene, and  $\beta$ -terpineol  
 AU Vig, O. P.; Sharma, S. D.; Matta, K. L.; Sehgal, J. M.  
 CS Dep. Chem., Panjab Univ., Chandigarh, India  
 SO Journal of the Indian Chemical Society (1971), 48(11), 993-9  
 CODEN: JICSAH; ISSN: 0019-4522  
 DT Journal  
 LA English  
 OS CASREACT 76:72664  
 AB Isobisabolene (I),  $\beta$ -bisabolene, and  $\beta$ -terpineol were prepared via  $\beta$ -oxo sulfoxides.  
 IT **76280-88-1P**  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 76280-88-1 HCAPLUS  
 CN 4-Hexen-1-one, 5-methyl-1-(4-methyl-3-cyclohexen-1-yl)- (9CI) (CA INDEX NAME)



L77 ANSWER 16 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN  
 AN 1970:21789 HCAPLUS  
 DN 72:21789  
 OREF 72:4001a,4004a  
 TI Synthesis of d,l-bisabolol  
 AU Kuznetsov, N. V.; Myrsina, R. A.  
 CS Inst. Org. Khim., Kiev, USSR  
 SO Dopovidi Akademii Nauk Ukrain's'koi RSR, Seriya B: Geologiya, Geofizika, Khimiya ta Biologiya (1969), 21(9), 810-11  
 CODEN: DBGGAM; ISSN: 0002-3523  
 DT Journal  
 LA Ukrainian  
 GI For diagram(s), see printed CA Issue.  
 AB A new advantageous variant in preparation of the title compds., presumed to have insecticidal and (or) herbicidal properties was described. Thus, tetrahydro-p-tolunitrile (I) was reacted, while boiling in ether solution, with a Grignard reagent derived from 2-methyl-5-bromopentene to give 76.7% 4-methyl-1-(1-oxo-5-methylhex-4-enyl)-3-cyclohexene (II), b14 157°. II was added dropwise into ether solution of MeMgI at <5° and the resulting mixture was boiled 7 hr to give 62.5% dl-bisabolol (III), b0-2 107-9°. Alternately, reaction of I with MeMgI gave 83.3% 1-methyl-4-acetylcyclohexane, followed by reaction with a Grignard reagent prepared from 2-methyl-5-bromopentene to give III; III acetate b0.3 122-3°.  
 IT **76280-88-1P**  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 76280-88-1 HCAPLUS  
 CN 4-Hexen-1-one, 5-methyl-1-(4-methyl-3-cyclohexen-1-yl)- (9CI) (CA INDEX NAME)



L77 ANSWER 17 OF 20 HCAPLUS . COPYRIGHT 2007 ACS on STN

AN 1966:104455 HCAPLUS

DN 64:104455

OREF 64:19687h,19688a-d

TI Terpenoids. X. Synthesis of  $\beta$ -bisabolene and dipentene

AU Vig, O. P.; Matta, Khushi Lall; Singh, Gurdip; Raj, Inder

CS Panjab Univ., Chandigarh

SO J. Indian Chem. Soc. (1966), 43(1), 27-31

DT Journal

LA English

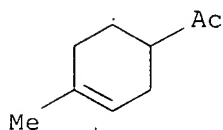
GI For diagram(s), see printed CA Issue.

AB cf. preceding abstract Dry C<sub>6</sub>H<sub>6</sub> (100 ml.) containing 0.5 g. p-MeC<sub>6</sub>H<sub>4</sub>SO<sub>3</sub>H and 14.2 g. 4-methyl-1-(1',1'-ethylenedioxyethyl)cyclohexan-4-ol refluxed 4-5 hrs. on a water bath and the cooled mixture freed from p-MeC<sub>6</sub>H<sub>4</sub>SO<sub>3</sub>H with 5% aqueous NaHCO<sub>3</sub>, extracted with Et<sub>2</sub>O and the product distilled yielded 75.19% 4-methyl-1-(1', 1'-ethylenedioxyethyl)-3-cyclohexene, b<sub>2-3</sub> 90°, n<sub>D</sub><sup>19.5</sup> 1.4720, deketalized in Me<sub>2</sub>CO and 10% HCl to yield 81.94% 4-methyl-1-acetyl-3-cyclohexene (I), b<sub>2-3</sub> 72.75°, n<sub>D</sub><sup>19.5</sup> 1.4700 [semicarbazone, m. 154° (dilute alc.)],  $\nu$  2900, 1720, 1435, 1165 cm.<sup>-1</sup> NaH (3.5 g.) added with stirring (N atmospheric) to 7.9 g. Et<sub>2</sub>CO<sub>3</sub> in 100 ml. C<sub>6</sub>H<sub>6</sub> containing 15.5 g. HCONMe<sub>2</sub> and the mixture treated dropwise at 60° with 4.7 g. I, the mixture refluxed 2 hrs. and the cooled mixture poured into H<sub>2</sub>O, extracted with C<sub>6</sub>H<sub>6</sub> and the residue on evaporation distilled in vacuo

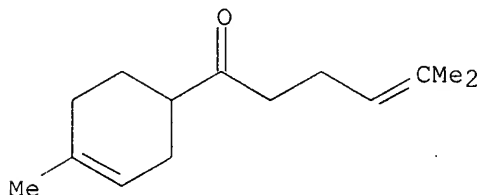
gave 53.0% yield of Et  $\beta$ -oxo- $\beta$ -(4-methyl-3-cyclohexenyl)propionate (II), b<sub>12</sub> 140-5°, n<sub>D</sub><sup>22</sup> 1.4750, giving a violet color in alc. FeCl<sub>3</sub>. Me<sub>3</sub>COK (0.65 g. K, 50 ml. Me<sub>3</sub>COH) treated at 5° with 3.4 g. II in 10 ml. Me<sub>3</sub>COH and the cooled mixture treated dropwise with 2.5 g. Me<sub>2</sub>C:CHCH<sub>2</sub>Br, the mixture refluxed 10 hrs. and the product extracted with Et<sub>2</sub>O gave 2.8 g.  $\beta$ -oxo ester III (R = CO<sub>2</sub>Et, R' = O) (IV), b<sub>12</sub> 170-80°, n<sub>D</sub><sup>22</sup> 1.4830, giving a violet color with alc. FeCl<sub>3</sub>. IV (2.5 g.) refluxed 10 hrs. in 45 ml. 1:2 H<sub>2</sub>O-MeOH containing 1.75 g. KOH and the residue on evaporation acidified with dilute HCl, extracted with Et<sub>2</sub>O and the residue on evaporation heated at 160-70° (oil bath) with 0.2 g. Cu powder gave 0.95 g. ketone III (R = H, R' = O) (V), b<sub>2-3</sub> 128-80°, n<sub>D</sub><sup>19.5</sup> 1.5030,  $\nu$  1720, 1460, 1380, 815 cm.<sup>-1</sup> Me<sub>2</sub>SO (6 ml.) and 0.35 g. NaH stirred at 0° (N atmospheric) with addition of 2.9 g. MePPh<sub>3</sub>I in 12.5 ml. and the mixture stirred 15 min. at 25°, treated with 0.7 g. V in 10 ml. tetrahydrofuran and stirred 2 hrs. at 50°, the cooled mixture poured into 20 ml. cold H<sub>2</sub>O and the product extracted into petr. ether gave 1.05 g.  $\beta$ -bisabolene III (R = H, R' = CH<sub>2</sub>), C<sub>15</sub>H<sub>24</sub>, b<sub>2-3</sub> 100-5°, n<sub>D</sub><sup>19.5</sup> 1.5090,  $\nu$  2900, 1650, 1460, 1380, 890, 815 cm.<sup>-1</sup>. A preparation of methylenephosphorane from 0.36 g. NaH, 3.5 ml. Me<sub>2</sub>SO, and 3 g. Ph<sub>3</sub>PMeI in 7.2 ml. Me<sub>2</sub>SO (N atmospheric) treated with 6.5 g. I in 7 ml. tetrahydrofuran

gave 77.5% yield of dipentene (VI), b<sub>2-3</sub> 55°, n<sub>D</sub><sup>20.5</sup> 1.4850,  $\nu$  2900, 1650, 1435, 1380, 890 cm.<sup>-1</sup>.

IT 6090-09-1P, Ketone, methyl 4-methyl-3-cyclohexen-1-yl  
 76280-88-1P, 4-Hexen-1-one, 5-methyl-1-(4-methyl-3-cyclohexen-1-yl)-  
 RL: PREP (Preparation)  
 (preparation of)  
 RN 6090-09-1 HCAPLUS  
 CN Ethanone, 1-(4-methyl-3-cyclohexen-1-yl)- (CA INDEX NAME)



RN 76280-88-1 HCAPLUS  
 CN 4-Hexen-1-one, 5-methyl-1-(4-methyl-3-cyclohexen-1-yl)- (9CI) (CA INDEX NAME)



L77 ANSWER 18 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 1966:104454 HCAPLUS

DN 64:104454

OREF 64:19687f-h

TI Terpenoids. IX. Synthesis of (±)-isopulegone

AU Vig, O. P.; Matta, Khashi Lall; Anand, Romesh; Raj, Inder

CS Panjab Univ., Chandigarh

SO J. Indian Chem. Soc. (1965), 42(12), 841-2

DT Journal

LA English

GI For diagram(s), see printed CA Issue.

AB cf. preceding abstract (±)-isopulegone (I), a component of essential oils, was synthesized and its structure determined (CA 61, 13347e), had ir peaks at 1725, 1060, and 1465 cm.<sup>-1</sup> A solution of methylsulfinyl carbanion was prepared under N from 0.68 g. NaH and 7 g. Me<sub>2</sub>SO. The solution was cooled, stirred during addition of 5.76 g. Ph<sub>3</sub>MeI in 14 ml. Me<sub>2</sub>SO, stirred 15 min. at room temperature, 1.4 g. II in 12 ml. tetrahydrofuran was added and stirring continued for 2 hrs. to give 58.9% III, b. 100°/3-4 mm., n<sub>D</sub><sup>20</sup> 1.4740. To 0.5 g. III was added 12 ml. acetone, 0.15 g. p-MeC<sub>6</sub>H<sub>4</sub>SO<sub>3</sub>H, and 1.5 ml. H<sub>2</sub>O and the mixture stirred at room temperature for 1 hr. to give 54%

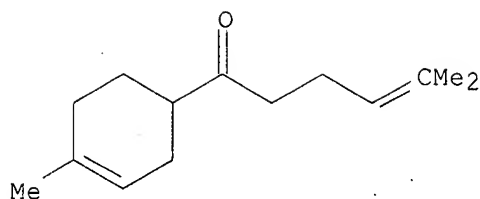
I, b. 70°/2-3 mm., n<sub>D</sub><sup>20</sup> 1.4700°; 2,4-dinitrophenylhydrazone m. 136° (EtOH).

IT 76280-88-1

(Derived from data in the 7th Collective Formula Index (1962-1966))

RN 76280-88-1 HCAPLUS

CN 4-Hexen-1-one, 5-methyl-1-(4-methyl-3-cyclohexen-1-yl)- (9CI) (CA INDEX NAME)



L77 ANSWER 19 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 1966:44018 HCAPLUS

DN 64:44018

OREF 64:8246h,8247a-b

TI Syntheses of (±)-β-bisabolene and 2-p-tolyl-6-methylhepta-1,5-diene

AU Moreno, A. Manjarrez; Guzman, A.

CS Univ. Nacl. Autonoma Mexico, Mexico, D.F.

SO Journal of Organic Chemistry (1966), 31(1), 348-9

CODEN: JOCEAH; ISSN: 0022-3263

DT Journal

LA English

GI For diagram(s), see printed CA Issue.

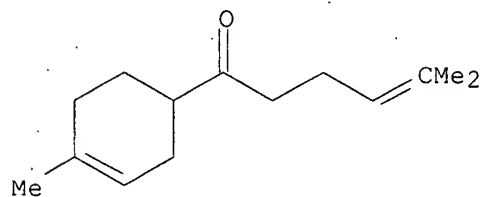
AB Me<sub>2</sub>C:CHCH<sub>2</sub>CH<sub>2</sub>MgBr coupled with 4-methyl-1-carboxy-3-cyclohexene acid chloride and the product fractionally distilled gave the oxo compound (I, R = O) (II). II reduced with NaBH<sub>4</sub> in MeOH gave the alc. I (R = H, OH). II treated with [Ph<sub>3</sub>MeP] Br in anhydrous Et<sub>2</sub>O gave the desired (±)-β-bisabolene I (R = CH<sub>2</sub>) trihydrochloride. The compound showed identical N.M.R., ir, and retention times on a silicone SE-30 column at 200° as β-bisabolene obtained from lanceol. Me<sub>2</sub>C:CHCH<sub>2</sub>CH<sub>2</sub>MgBr coupled with p-MeC<sub>6</sub>H<sub>4</sub>COCl gave the ketone (III, R = O). Treatment of the ketone with [Ph<sub>3</sub>MeP]Br gave material, purified by thin-layer chromatography on silica gel from 95:5 C<sub>6</sub>H<sub>14</sub>-EtOAc to yield pure III (R = CH<sub>2</sub>) (IV). Dehydration of 2-p-tolyl-6-methylhept-5-en-2-ol by refluxing in 10% aqueous (CO<sub>2</sub>H)<sub>2</sub> 4 hrs. and chromatographic purification of the isolated oily product gave 20% V and 60% IV.

IT 76280-88-1P, 4-Hexen-1-one, 5-methyl-1-(4-methyl-3-cyclohexen-1-yl)-

RL: PREP (Preparation)  
(preparation of)

RN 76280-88-1 HCAPLUS

CN 4-Hexen-1-one, 5-methyl-1-(4-methyl-3-cyclohexen-1-yl)- (9CI) (CA INDEX NAME)



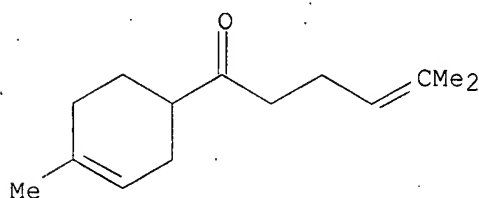
L77 ANSWER 20 OF 20 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 1966:44017 HCAPLUS

DN 64:44017

OREF 64:8246f-h

TI Terpenes. CLXXVI. Isolation and structure of dimethoxydihydrofuroeremophilane  
 AU Novotny, L.; Samek, Z.; Sorm, F.  
 CS Csl. Akad. Ved, Prague  
 SO Collection of Czechoslovak Chemical Communications (1966), 31(1), 371-4  
 CODEN: CCCCAK; ISSN: 0010-0765  
 DT Journal  
 LA English  
 GI For diagram(s), see printed CA Issue.  
 AB cf. CA 63, 18174h. 8,12-Dimethoxydihydrofuroeremophilane (I), isolated from the rhizomes of *Petasites hybridus* (CA 57, 9886f) has been assigned structure I as more probable than Ia on the basis of hydrogenation and N.M.R. spectra. I, isolated from petroleum ether eluates after chromatography of the rhizome extract, m. 103°,  $[\alpha]_{20D}$  66.3°. Hydrogenation of 300 mg. I in 20 ml. AcOH over 200 mg. PtO<sub>2</sub> gave oily II and crystalline III, m. 125°.  
 IT 76280-88-1  
 (Derived from data in the 7th Collective Formula Index (1962-1966))  
 RN 76280-88-1 HCAPLUS  
 CN 4-Hexen-1-one, 5-methyl-1-(4-methyl-3-cyclohexen-1-yl)- (9CI) (CA INDEX NAME)



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FILE 'USPATFULL' ENTERED AT 13:16:05 ON 27 NOV 2007

CA INDEXING COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 27 Nov 2007 (20071127/PD)

FILE LAST UPDATED: 27 Nov 2007 (20071127/ED)

HIGHEST GRANTED PATENT NUMBER: US7302709

HIGHEST APPLICATION PUBLICATION NUMBER: US2007271667

CA INDEXING IS CURRENT THROUGH 27 Nov 2007 (20071127/UPCA)

ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 27 Nov 2007 (20071127/PD)

REVISED CLASS FIELDS (/NCL) LAST RELOADED: Oct 2007

USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Oct 2007

=> => d 178 bib abs hitstr

L78 ANSWER 1 OF 1 USPATFULL on STN

AN 2005:138508 USPATFULL

TI Use of unsaturated ketones as a perfume

IN Markert, Thomas, Monheim, GERMANY, FEDERAL REPUBLIC OF  
 Pormann, Volker, Hilden, GERMANY, FEDERAL REPUBLIC OF  
 Rittler, Frank, Dusseldorf, GERMANY, FEDERAL REPUBLIC OF

PI US 2005119158 A1 20050602

AI US 2003-507203 A1 20030217 (10)

WO 2003-EP1561 20030217

PRAI DE 2002-10212026 20020319

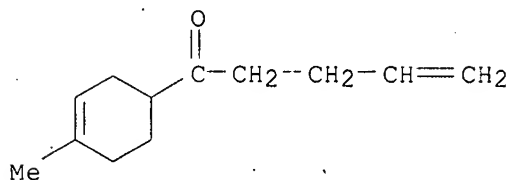
DT Utility  
 FS APPLICATION  
 LREP OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C., 1940 DUKE STREET,  
 ALEXANDRIA, VA, 22314, US  
 CLMN Number of Claims: 7  
 ECL Exemplary Claim: 1  
 DRWN No Drawings  
 LN.CNT 338

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

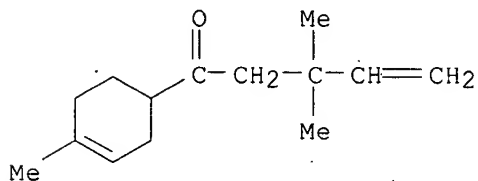
AB Unsaturated ketones of general formula (I) where the groups R1, R2, R3, R4 and R5 independently .dbd.H or 1-6 C alkyl groups, which can be saturated or unsaturated, straight-chained, branched or cyclic are characterised by an interesting and original odour characteristic with good emanation and are suitable for use as perfumes, for example in cosmetic preparations, technical products or alcoholic perfumery.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

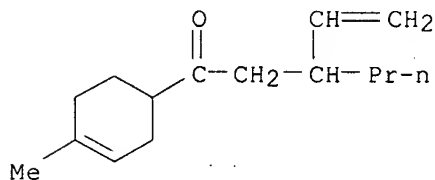
IT 59175-60-9P 597533-64-7P 597533-65-8P  
 (preparation and use of unsatd. ketones as fragrances for perfumes)  
 RN 59175-60-9 USPATFULL  
 CN 4-Penten-1-one, 1-(4-methyl-3-cyclohexen-1-yl)- (9CI) (CA INDEX NAME)



RN 597533-64-7 USPATFULL  
 CN 4-Penten-1-one, 3,3-dimethyl-1-(4-methyl-3-cyclohexen-1-yl)- (CA INDEX NAME)



RN 597533-65-8 USPATFULL  
 CN 1-Hexanone, 3-ethenyl-1-(4-methyl-3-cyclohexen-1-yl)- (CA INDEX NAME)



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(FILE 'HOME' ENTERED AT 12:36:18 ON 27 NOV 2007)  
DEL HIS

FILE 'HCAPLUS' ENTERED AT 12:37:18 ON 27 NOV 2007

L1 1 S US20050119158/PN OR (US2005-507203# OR WO2003-EP1561 OR DE200  
E MARKERT/AU  
L2 1 S E3  
E MARKERT T/AU  
L3 104 S E3-E6,E8  
E PORRMANN/AU  
L4 14 S E9  
E PORMAN/AU  
E RITTLER/AU  
L5 7 S E4,E5  
E KAO/CO  
L6 16788 S E4,E18-E47  
E E23+ALL  
L7 19329 S E2+RT OR E2-E18/PA,CS  
E KAO/CO  
L8 16766 S E3,E4,E11-E15,E18-E36  
L9 47 S E37-E48  
L10 3 S E51,E52  
L11 260 S E75-E78,E80-E84  
L12 68 S E85-E90  
L13 29 S E91-E96  
L14 2399 S E100-E122  
E KAO/PA,CS  
L15 10 S E26-E36  
L16 14414 S E37-E46,E50-E60  
L17 15597 S E61-E120  
L18 1153 S E121-E155  
L19 3 S E168,E169  
L20 255 S E219-E228,E231-E240  
L21 65 S E241-E250  
L22 27 S E258-E271  
L23 1770 S E277-E288  
L24 1469 S E289-E335  
L25 2 S E347  
L26 3 S 1 ACETYL 4 METHYL 3 CYCLOHEXENE  
L27 0 S 1 1 1 DIETHOXYETHYL 4 METHYLCYCLOHEX 3 ENE  
L28 0 S 1 1 1 DIETHOXY ETHYL 4 METHYLCYCLOHEX 3 ENE  
L29 0 S 1 1 1 DI ETHOXY ETHYL 4 METHYLCYCLOHEX 3 ENE  
L30 1 S (DI ETHOXY ETHYL OR DIETHOXY ETHYL OR DIETHOXYETHYL) (S) (METHY  
L31 7 S (DI ETHOXY ETHYL OR DIETHOXY ETHYL OR DIETHOXYETHYL) (S) METHYL  
L32 1 S L26 AND L30,L31  
L33 1 S L1 AND L2-L24  
L34 1 S L32,L33  
SEL RN

FILE 'REGISTRY' ENTERED AT 12:48:52 ON 27 NOV 2007

L35 11 S E1-E11  
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L38 3 S L35 AND 46.150.2/RID NOT L36,L37  
L39 STR  
L40 2 S L39 SAM  
L41 STR L39

L42 201673 S 46.150.2/RID  
L43 1 S L41 CSS SAM SUB=L42  
L44 4 S L41 SAM SUB=L42  
L45 52 S L41 FUL SUB=L42  
SAV TEMP L45 HARDEE507/A  
L46 1 S L45 AND C12H180  
L47 11 S L45 AND C14H220  
SEL RN 4-11  
L48 3 S L47 NOT E12-E19  
L49 4 S L45 AND C15H240  
SEL RN 1-3  
L50 1 S L49 NOT E20-E22  
L51 5 S L38,L46,L48,L50

FILE 'HCAOLD' ENTERED AT 13:02:40 ON 27 NOV 2007

L52 2 S L51  
L53 1 S L52 AND L36,L37  
L54 2 S L52,L53  
SEL AN  
EDIT E23-E24 /AN /OREF;FIL HCAPLUS;S E23-E24  
EDIT /AN  
DEL SEL  
SEL AN L54  
EDIT /AN /OREF

FILE 'HCAPLUS' ENTERED AT 13:04:00 ON 27 NOV 2007

L55 4 S E1-E2  
L56 2 S L55 NOT (NOVOTNY ?/AU OR ISOPULEGONE/TI)  
L57 21 S L51  
L58 2 S L56 AND L57  
L59 6 S L36,L37 AND L57  
L60 21 S L56-L59  
L61 20 S L60 AND PY<=2003 NOT P/DT  
L62 20 S L60 AND PY<=2002 NOT P/DT  
L63 1 S L60 AND (PD<=20030217 OR PRD<=20030217) AND P  
L64 1 S L60 AND (PD<=20020319 OR PRD<=20020319 OR AD<=20020319) AND P  
L65 1 S L60-L64 AND L1-L34  
L66 1 S A61K007-46/IPC,IC,ICM,ICS AND L60  
E PERFUME/CT  
L67 16587 S E3-E25  
E E7+ALL  
L68 16870 S E2+OLD,NT  
E E13+ALL  
L69 31928 S E2+OLD  
L70 1 S L60 AND L67-L69  
L71 1 S L60 AND (TOILET? OR PERFUM? OR ODOR? OR ODOUR? OR MALODOR? OR  
L72 1 S L60 AND COSMETIC?/SC,SX,CW,CT,BI  
L73 1 S L63-L66,L70-L72  
L74 1 S L73 AND L35  
L75 20 S L60 NOT L74  
L76 7 S L75 AND L35  
L77 20 S L75,L76

FILE 'USPATFULL' ENTERED AT 13:12:12 ON 27 NOV 2007

L78 1 S L51

FILE 'REGISTRY' ENTERED AT 13:14:40 ON 27 NOV 2007

FILE 'HCAOLD' ENTERED AT 13:14:58 ON 27 NOV 2007



FILE 'HCAPLUS' ENTERED AT 13:15:28 ON 27 NOV 2007

FILE 'USPATFULL' ENTERED AT 13:16:05 ON 27 NOV 2007

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